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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/008,531 01/16/98 RHODES

H MI0012V2

EXAMINER

MM42/0218

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ART UNIT

PAPER NUMBER

2823

DATE MAILED:

02/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/008,531

Applicant(s)

RHODES, HOWARD E.

Examiner

Kurt M Eaton

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 17) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 21-25 are rejected under 35 U.S.C. 102(a) as being anticipated by Jost et al..

In re claim 21, Jost et al. (herein referred to as Jost) shows a process for making a semiconductor device including the steps of:

forming a layer of conductive material (28) having a topography that includes a substantially vertical component {Figure 1; column 3, lines 55-56}; and

forming a contact disposed adjacent to and contacting the vertical component {Figure 5; column 6, lines 28-31}.

In re claim 22, Jost shows wherein the vertical component defines a localized thick region in the layer of conductive material {Figure 1}.

In re claim 23, Jost shows wherein the vertical component is a spacer {Figure 1}.

In re claim 24, Jost shows forming a structure (30) having an opening (34) therein under the conductive layer and filling the opening with the conductive material to form the vertical component {Figure 1}.

In re claim 25, Jost shows wherein the conductive material is a capacitor electrode {Figure 1; column 3, lines 49-56}.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jost.

Jost shows in Figures 1-5 a process for making a semiconductor device including the steps of providing a first layer of material (30) made of insulating material and forming an opening (34) therein, the opening including sidewalls; forming a layer of a first conductive material (28) made of polysilicon on the first layer of material and along the surfaces of the sidewalls of the opening to form a localized thick region, wherein the first conductive material forms spacers on the sidewalls of the opening; forming an overlayer of material (32) made of insulating material on the layer of the first conductive material; forming a contact hole in the overlayer which communicates with the layer of the first conductive material and contacts at least the spacers; and substantially filling the contact hole in the overlayer with a second conductive material {column 3, line 49 – column 6, line 31}.

Jost does not show wherein the second conductive material is made of a material including a metal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that the second conductive material could have been made of a metal material since the only material requirement of Jost concerning this layer is that the second conductive material be

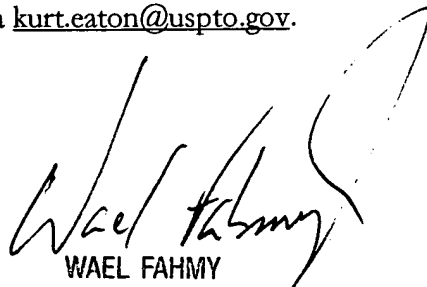
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electrically conductive. Metal is a well known material that is electrically conductive. Therefore, it would have been obvious to form the second conductive material out of a metal since the selection of a known material on the basis of its suitability for its intended use involves only routine skill in the art. Furthermore, the specification contains no disclosure of either the critical nature of the claimed material or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen materials or upon another variable recited in a claim, the applicant must show that the chosen variable is critical.

Conclusion

5. Paper related to this application may be submitted directly to Art Unit 2823 by facsimile transmission. Papers should be faxed to Art Unit 2823 via the Art Unit 2823 Fax Center located in Crystal Plaza 4, room 4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2823 Fax Center number is (703) 308-7722 or -7724. The Art Unit 2823 Fax Center is to be used only for papers related to Art Unit 2823 applications.

Any inquiry concerning this communication of earlier communication from the examiner should be directed to **Kurt Eaton** at (703) 305-0383 and between the hours of 8:00 AM to 4:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via kurt.eaton@uspto.gov.



Wael Fahmy
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

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